According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  $IPC \ 7 \ E21B$ 

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## EPO-Internal

Category •	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 979 571 A (NAZZAL GREG ET AL) 9 November 1999 (1999-11-09) column 1, line 18-20,25-30,50-55,62-65 -column 2, line 45-51; figures 10-12 column 3, line 26-35 -column 5, line 20-23,36-39,47-50,58-60,63,64	1-7, 10-14
Υ	20 20,00 00,00 00,00	9
X	US 2001/035302 A1 (DESAI PRAFUL C ET AL)  1 November 2001 (2001-11-01)  paragraph 10, lines 7-10  figures 1,3-7  paragraph 12, lines 1-7 on page 2  paragraph '0032!  paragraph '0033!  paragraph '0034!  paragrapg 36, lines 7-10	1,2,4,5, 7,10-14
	-/	

X Further documents are listed in the continuation of box C.	Patent family memburs are listed in annex.		
A document defining the general state of the art which is not considered to be of particular relevance  E earlier document but published on or after the international filing date  L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  O document reterring to an oral disclosure, use, exhibition or other means  P document published prior to the international filing date but later than the priority date claimed	<ul> <li>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention.</li> <li>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone.</li> <li>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</li> <li>"3" document member of the same patent family</li> </ul>		
Date of the actual completion of the international search	Date of mailing of the international search report  04/12/2003		
27 November 2003	Authorized officer		
Name and mailing address of the ISA  European Patent Office, P.B. 5816 Patentiaan 2  NL – 2280 HV Rijswijk  Tel. (+31-70) 340-2340, Tx. 31 651 epc nl.  Fax: (+31-70) 340-3016	Georgescu, M		

Form PCT/ISA,210 (second sneet) (July 1992)

C.(Contlaux	tion) DOCUMENTS CONSIDERED TO BE RELEVANT	1 61/18 03/03692
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Υ	EP 0 462 955 A (DIAMANT BOART STRATABIT SA ;SANDVIK AB (SE))	. 9
,	27 December 1991 (1991-12-27) figures 4,5 US 2002/074168 A1 (GRIFFIN NIGEL DENNIS	9
	ET AL) 20 June 2002 (2002-06-20) figures 27A,27B	

1	PCT/IB	03/03892
1	101/10	03/03035

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 5979571	A	09-11-1999	AU AU CA GB NO WO		A ,B A	22-03-2001 17-04-1998 02-04-1998 16-09-1998 24-07-1998 02-04-1998
US 2001035302	A1	01-11-2001	GB	2335217	Α	15-09-1999
EP 0462955	A	27-12-1991	DE DE EP IE NO US ZA	69115766 69115766 0462955 912036 912306 5217081 9104394	T2 A1 A1 A ,B,	08-02-1996 23-05-1996 27-12-1991 18-12-1991 16-12-1991 08-06-1993 26-08-1992
US 2002074168	A1	20-06-2002	AUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	2423099 2423102 1190999 1191000 1191001 1190791 1324960 1318969 0224603 0224601 20031253 20031254 2003021995 2003034182 2003035957 2003037640 2003035958 2002034632	A A1 A2 A2 A2 A1	02-04-2002 02-04-2002 28-03-2002 27-03-2002 27-03-2002 27-03-2002 27-03-2002 27-03-2002 09-07-2003 18-06-2003 28-03-2002 19-05-2003 19-05-2003 20-02-2003 20-02-2003 21-03-2002 21-03-2002 21-03-2002 21-03-2002 21-03-2002 12-03-2002 12-03-2002 12-03-2002 12-03-2002 02-10-2002 03-10-2002 03-10-2002